

IN THE CLAIMS

1. (previously presented) A transmitting apparatus, comprising:

a plurality of audio channel material supplying means for supplying a plurality of audio broadcast materials of audio digital data;

data supplying means for supplying digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

download audio data supplying means for supplying download audio data compressed in a predetermined compressing format;

multiplexing means for multiplexing the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data; and

transmitting means for transmitting the multiplexed data.

2. (previously presented) A transmitting method, comprising:

supplying a plurality of audio broadcast materials of audio digital data, digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display, and download audio data of audio data compressed in a predetermined compressing format;

multiplexing the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data of the audio data compressed in the predetermined compressing format; and

transmitting the multiplexed data.

3. (previously presented) An information editing apparatus, comprising:

a plurality of audio channel material supplying means for supplying a plurality of audio broadcast materials of audio digital data;

data supplying means for supplying digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

download audio data supplying means for supplying download audio data compressed in a predetermined compressing format; and

multiplexing means for multiplexing the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data,

wherein the same audio broadcast material and the same digital data is repeatedly transmitted in each of the plurality of audio broadcasts, and

wherein the music materials transmitted in the plurality of audio broadcasts correspond to the download audio data.

4. (previously presented) An information editing method, comprising supplying a plurality of audio broadcast materials of audio digital data, digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the

user and the display, and download audio data of audio data compressed in a predetermined compressing format; and

 multiplexing the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data of the audio data compressed in the predetermined compressing format,

 wherein the same audio broadcast material and the same digital data is repeatedly transmitted in each of the plurality of audio broadcasts, and wherein the music materials transmitted in the plurality of audio broadcasts correspond to the download audio data.

5. (previously presented) A receiving apparatus, comprising:

 receiving means for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display, and download audio data of audio data compressed in a predetermined compressing format have been multiplexed;

 data demultiplexing means for demultiplexing the multiplexed signal into the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

 audio reproducing means for reproducing sound from the audio digital data;

 download data decoding means for decoding the download audio data;

displaying means for displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast;

input means for inputting data on the display screen;
and

controlling means for selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen through said input means and for outputting download audio data of music information corresponding to an audio information download command that is input on the display screen through said input means.

6. (previously presented) A receiving method, comprising:

receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display, and download audio data of audio data compressed in a predetermined compressing format have been multiplexed;

demultiplexing the multiplexed signal into the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

reproducing sound from the audio digital data;

displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast;

selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen; and

outputting download audio data of music information corresponding to an audio information download command that is input on the display screen.

7. (previously presented) An information storing apparatus, comprising:

receiving means for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an audio information screen corresponding to a transmitted audio broadcast, and download audio data of audio data compressed in a predetermined compressing format have been multiplexed;

data demultiplexing means for demultiplexing the multiplexed signal into the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

audio reproducing means for reproducing sound from the audio digital data;

displaying means for displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast;

input means for inputting data on the display screen; controlling means for selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen through said input means and for outputting download audio data of music information

corresponding to an audio information download command that is input on the display screen through said input means; and

storing means for storing the output download audio data, wherein when the music information selection command is input on the display screen through said input means, an audio broadcast of a music program corresponding to the music information selection command is selected so as to allow the listener to listen to a demo of the music material, and wherein when the music information download command is input, audio data corresponding to the music information is stored to said storing means.

8. (previously presented) An information storing method, comprising:

receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an audio information screen corresponding to a transmitted audio broadcast, and download audio data of audio data compressed in a predetermined compressing format have been multiplexed;

demultiplexing the multiplexed signal into the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

reproducing sound from the audio digital data;

displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast; when the music information selection command is input on the display screen, selecting an audio broadcast of a music program corresponding to the music information selection command so as to allow the listener to listen to a demo of the music material, and

when the music information download command is input, storing audio data corresponding to the music information.

9. (previously presented) A broadcasting system having a transmitting station for broadcasting a TV signal and an audio signal and a receiving station for receiving signals from the transmitting station,

wherein the transmitting station has a transmitting apparatus comprising:

a plurality of audio channel material supplying means for supplying a plurality of audio broadcast materials of audio digital data;

data supplying means for supplying digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

download audio data supplying means for supplying download audio data compressed in a predetermined compressing format;

multiplexing means for multiplexing the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data; and

transmitting means for transmitting the multiplexed data, and

wherein the receiving station has a receiving apparatus comprising:

receiving means for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an audio information screen corresponding to a transmitted audio broadcast, and download audio data of audio data

compressed in a predetermined compressing format have been multiplexed;

data demultiplexing means for demultiplexing the multiplexed signal into the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

audio reproducing means for reproducing sound from the audio digital data;

download data decoding means for decoding the download audio data;

displaying means for displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast;

input means for inputting data on the display screen;
and

controlling means for selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen through said input means and for outputting download audio data of music information corresponding to an audio information download command that is input on the display screen through said input means, and

an information storing apparatus for storing the download audio data that is output from the receiving apparatus.

10. (previously presented) A transmitting apparatus, comprising:

program broadcast material supplying means for supplying a video broadcast material composed of moving picture digital data and audio digital data corresponding thereto;

a plurality of audio channel material supplying means for supplying a plurality of audio broadcast materials of audio digital data;

data supplying means for supplying digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

multiplexing means for multiplexing the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast; and

transmitting means for transmitting the multiplexed data.

11. (previously presented) A transmitting method, comprising:

supplying a video broadcast material composed of moving picture digital data and audio digital data corresponding thereto, a plurality of audio broadcast materials of audio digital data, and digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

multiplexing the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast; and

transmitting the multiplexed data.

12. (previously presented) An information editing apparatus, comprising:

program broadcast material supplying means for supplying a video broadcast material composed of moving picture digital data and audio digital data corresponding thereto;

a plurality of audio channel material supplying means for supplying a plurality of audio broadcast materials of audio digital data; data supplying means for supplying digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display; and

multiplexing means for multiplexing the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast,

wherein the same audio broadcast material and the same digital data is repeatedly transmitted in each of the plurality of audio broadcasts.

13. (previously presented) An information editing method, comprising:

supplying a video broadcast material composed of moving picture digital data and audio digital data corresponding thereto, a plurality of audio broadcast materials of audio digital data, and digital data for an audio information screen corresponding to a transmitted audio broadcast said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display; and

multiplexing the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast,

wherein the same audio broadcast material and the same digital data is repeatedly transmitted in each of the plurality of audio broadcasts.

14. (previously presented) A receiving apparatus, comprising:

receiving means for receiving a signal of which moving picture digital data of a video broadcast, audio digital data corresponding thereto, audio digital data of a plurality of audio broadcasts, and digital data for an audio information screen corresponding to a transmitted audio broadcast have been multiplexed, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

data demultiplexing means for demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast;

moving picture reproducing means for reproducing a moving picture from the moving picture digital data;

audio reproducing means for reproducing sound from the audio digital data;

displaying means for displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen;

input means for inputting data on the display screen;
and

controlling means for selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen through said input means.

15. (previously presented) A receiving method, comprising the steps of:

receiving a signal of which moving picture digital data of a video broadcast, audio digital data corresponding thereto, audio digital data of a plurality of audio broadcasts, and digital data for an audio information screen corresponding to a transmitted audio broadcast have been multiplexed, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast;

reproducing a moving picture from the moving picture digital data;

reproducing sound from the audio digital data;

displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen; and

selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen.

16. (previously presented) An information storing apparatus, comprising:

receiving means for receiving a signal of which moving picture digital data of a video broadcast, audio digital data corresponding thereto, audio digital data of a plurality of audio broadcasts, and digital data for an audio information screen corresponding to a transmitted audio broadcast have been multiplexed, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

data demultiplexing means for demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast;

moving picture reproducing means for reproducing a moving picture from the moving picture digital data;

audio reproducing means for reproducing sound from the audio digital data;

displaying means for displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen;

input means for inputting data on the display screen;

controlling means for selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen through said input means; and

storing means for storing the reproduced audio signal, wherein when music information selection command is input on the display screen through said input means, an audio

broadcast of a music program corresponding to the music information selection command is selected and the audio signal of the audio broadcast is stored to said storing means.

17. (previously presented) An information storing method, comprising the steps of:

receiving a signal of which moving picture digital data of a video broadcast, audio digital data corresponding thereto, audio digital data of a plurality of audio broadcasts, and digital data for an audio information screen corresponding to a transmitted audio broadcast have been multiplexed, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast;

reproducing a moving picture from the moving picture digital data;

reproducing sound from the audio digital data;

displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen; and

when music information selection command is input on the display screen, selecting an audio broadcast of a music program corresponding to the music information selection command and storing the audio signal of the audio broadcast.

18. (previously presented) A broadcasting system having a transmitting station for broadcasting a TV signal and an audio signal and a receiving station for receiving signals from the transmitting station,

wherein the transmitting station has a transmitting apparatus comprising:

program broadcast material supplying means for supplying a video broadcast material composed of moving picture digital data and audio digital data corresponding thereto;

a plurality of audio channel material supplying means for supplying a plurality of audio broadcast materials of audio digital data;

data supplying means for supplying digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

multiplexing means for multiplexing the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast; and

transmitting means for transmitting the multiplexed data, and

wherein the receiving station has a receiving apparatus comprising:

receiving means for receiving a signal of which moving picture digital data of a video broadcast, audio digital data corresponding thereto, audio digital data of a plurality of audio broadcasts, and digital data for an audio information screen corresponding to a transmitted audio broadcast have been multiplexed;

data demultiplexing means for demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, and the digital data for the audio information screen corresponding to the transmitted audio broadcast;

moving picture reproducing means for reproducing a moving picture from the moving picture digital data;

audio reproducing means for reproducing sound from the audio digital data;

displaying means for displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen;

input means for inputting data on the display screen;
and

controlling means for selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen through said input means, and

an information storing apparatus for storing sound reproduced from the receiving apparatus.

19. (previously presented) A transmitting apparatus, comprising:

program broadcast material supplying means for supplying a video broadcast material composed of moving picture digital data and first audio digital data corresponding thereto;

a plurality of audio channel material supplying means for supplying a plurality of audio broadcast materials of audio digital data;

data supplying means for supplying digital data for an audio information screen corresponding to a transmitted audio broadcast;

download data supplying means for supplying download audio data separately from the first audio digital data, the download audio data being compressed corresponding to a predetermined compressing format;

multiplexing means for multiplexing the moving picture digital data of the video broadcast, the first audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data; and

transmitting means for transmitting the multiplexed data.

20. (previously presented) A transmitting method, comprising:

supplying a video broadcast material composed of moving picture digital data and first audio digital data corresponding thereto, a plurality of audio broadcast materials of audio digital data, and digital data for an audio information screen corresponding to a transmitted audio broadcast;

supplying download audio data separately from the first audio digital data, the download audio data being compressed corresponding to a predetermined compressing format;

multiplexing the moving picture digital data of the video broadcast, the first audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format; and

transmitting means for transmitting the multiplexed data.

21. (previously presented) An information editing apparatus, comprising:

program broadcast material supplying means for supplying a video broadcast material composed of moving picture digital data and audio digital data corresponding thereto;

a plurality of audio channel material supplying means for supplying a plurality of audio broadcast materials of audio digital data;

data supplying means for supplying digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display;

download data supplying means for supplying download audio data compressed corresponding to a predetermined compressing format;

multiplexing means for multiplexing the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data; and

transmitting means for transmitting the multiplexed data.

wherein the same audio broadcast material and the same digital data is repeatedly transmitted in each of the plurality of audio broadcasts, and

wherein the music materials transmitted in the plurality of audio broadcasts correspond to the download audio data.

22. (previously presented) An information editing method, comprising:

supplying a video broadcast material composed of moving picture digital data and audio digital data corresponding thereto, a plurality of audio broadcast materials of audio digital data, digital data for an audio information screen corresponding to a transmitted audio broadcast, said digital data including interactive GUI data used to generate an interactive on-screen display to allow interaction between the user and the display, and download audio data compressed corresponding to a predetermined compressing format; and

multiplexing the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data,

wherein the same audio broadcast material and the same digital data is repeatedly transmitted in each of the plurality of audio broadcasts, and

wherein the music materials transmitted in the plurality of audio broadcasts correspond to the download audio data.

23. (previously presented) A receiving apparatus, comprising:

receiving means for receiving a signal of which moving picture digital data of a video broadcast, first audio digital data corresponding thereto, audio digital data of a plurality of audio broadcasts, digital data for an audio information screen corresponding to a transmitted audio broadcast, and download audio data separate from the first audio digital data and

compressed in a predetermined compressing format have been multiplexed;

data demultiplexing means for demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the first audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

moving picture reproducing means for reproducing a moving picture from the moving picture digital data;

audio reproducing means for reproducing sound from the audio digital data;

download data decoding means for decoding the download audio data;

displaying means for displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen;

input means for inputting data on the display screen; and

controlling means for selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen through said input means and for outputting download audio data of music information corresponding to an audio information download command that is input on the display screen through said input means.

24. (previously presented) A receiving method, comprising:

receiving a signal of which moving picture digital data of a video broadcast, audio digital data corresponding

thereto, first audio digital data of a plurality of audio broadcasts, digital data for an audio information screen corresponding to a transmitted audio broadcast, and download audio data separate from the first audio digital data and compressed in a predetermined compressing format have been multiplexed;

demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the first audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

reproducing a moving picture from the moving picture digital data;

reproducing sound from the audio digital data;

decoding the download audio data;

displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen; and

selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen and for outputting download audio data of music information corresponding to an audio information download command that is input on the display screen.

25. (previously presented) An information storing apparatus, comprising:

receiving means for receiving a signal of which moving picture digital data of a video broadcast, first audio digital data corresponding thereto, audio digital data of a plurality of audio broadcasts, digital data for an audio information screen

corresponding to a transmitted audio broadcast, and download audio data separate from the first audio digital data and compressed in a predetermined compressing format have been multiplexed;

data demultiplexing means for demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the first audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

moving picture reproducing means for reproducing a moving picture from the moving picture digital data;

audio reproducing means for reproducing sound from the audio digital data;

displaying means for displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen;

input means for inputting data on the display screen;

controlling means for selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen through said input means and for outputting download audio data of music information corresponding to an audio information download command that is input on the display screen through said input means; and

storing means for storing the output download audio data,

wherein when music information selection command is input on the display screen through said input means, an audio broadcast of a music program corresponding to the music

information selection command is selected so as to allow the listener to listen to a demo of the music material, and

wherein when the music information download command is input, audio data corresponding to the music information is stored to said storing means.

26. (previously presented) An information storing method, comprising:

receiving a signal of which moving picture digital data of a video broadcast, audio digital data corresponding thereto, audio digital data of a plurality of audio broadcasts, digital data for an audio information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed;

demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

reproducing a moving picture from the moving picture digital data;

reproducing sound from the audio digital data;

displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen;

when music information selection command is input on the display screen, selecting an audio broadcast of a music program corresponding to the music information selection command so as to allow the listener to listen to a demo of the music material, and when the music information download command is

input, storing audio data corresponding to the music information.

27. (previously presented) A broadcasting system having a transmitting station for broadcasting a TV signal and an audio signal and a receiving station for receiving signals from the transmitting station,

wherein the transmitting station has a transmitting apparatus comprising:

program broadcast material supplying means for supplying a video broadcast material composed of moving picture digital data and first audio digital data corresponding thereto;

a plurality of audio channel material supplying means for supplying a plurality of audio broadcast materials of audio digital data;

data supplying means for supplying digital data for an audio information screen corresponding to a transmitted audio broadcast;

download audio data supplying means for supplying download audio data separate from the first audio digital data and compressed in a predetermined compressing format;

multiplexing means for multiplexing the moving picture digital data of the video broadcast, the first audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data; and

transmitting means for transmitting the multiplexed data, and

wherein the receiving station has a receiving apparatus comprising:

receiving means for receiving a signal of which moving picture digital data of a video broadcast, audio digital data

corresponding thereto, audio digital data of a plurality of audio broadcasts, digital data for an audio information screen corresponding to a transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format have been multiplexed;

data demultiplexing means for demultiplexing the multiplexed signal into the moving picture digital data of the video broadcast, the first audio digital data corresponding thereto, the audio digital data of the plurality of audio broadcasts, the digital data for the audio information screen corresponding to the transmitted audio broadcast, and the download audio data compressed in the predetermined compressing format;

moving picture reproducing means for reproducing a moving picture from the moving picture digital data;

audio reproducing means for reproducing sound from the audio digital data;

download data decoding means for decoding the download audio data;

displaying means for displaying audio information of the transmitted audio broadcast corresponding to the digital data for the audio information screen corresponding to the transmitted audio broadcast on a screen;

input means for inputting data on the display screen;
and

controlling means for selecting an audio broadcast of a music program corresponding to a music information selection command that is input on the display screen through said input means and for outputting download audio data of music information corresponding to an audio information download command that is input on the display screen through said input means, and

an information storing apparatus for storing sound reproduced from the receiving apparatus.

28. (previously presented) A receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed, the receiving apparatus comprising:

decoding means for decoding PCM audio data from the download audio data compressed in the predetermined compressing format;

selecting means for selectively outputting the audio data compressed in the predetermined compressing format or the PCM audio data;

a data output terminal for outputting audio data received from said selecting means; and

a control signal input/output terminal for inputting and outputting a control signal,

wherein the receiving apparatus determines whether or not a device connected thereto is capable of inputting the audio data compressed in the predetermined compressing format corresponding to the control signal that is input and output through said control signal input/output terminal.

29. (original) The receiving apparatus as set forth in claim 28, wherein said selecting means selects the audio data compressed in the predetermined compressing format when the connected device is capable of inputting the audio data compressed in the predetermined compressing format.

30. (original) A receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts,

digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed, the receiving apparatus comprising:

decoding means for decoding PCM audio data from the download audio data compressed in the predetermined compressing format;

selecting means for selectively outputting the audio data compressed in the predetermined compressing format and the PCM audio data; and

interface means for exchanging digital audio data received from said selecting means and a control signal,

wherein the receiving apparatus determines whether or not a device connected thereto is capable of inputting the audio data compressed in the predetermined compressing format corresponding to the control signal that is exchanged through said interface means, and

wherein said selecting means selects the audio data compressed in the predetermined compressing format or the PCM audio data corresponding to the determined result.

31. (original) The receiving apparatus as set forth in claim 30, wherein said selecting means selects the audio data compressed in the predetermined compressing format when the connected device is capable of inputting the audio data compressed in the predetermined compressing format.

32. (original) An information storing system, comprising:

a receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed; and

a storing apparatus for storing the download audio data received by said receiving apparatus,

wherein the receiving apparatus comprises:

decoding means for decoding PCM audio data from the download audio data compressed in the predetermined compressing format;

selecting means for selectively outputting the audio data compressed in the predetermined compressing format and the PCM audio data;

a data output terminal for outputting audio data received from said selecting means; and

a control signal input/output terminal for inputting and outputting a control signal,

wherein the storing apparatus comprises:

a control signal input/output terminal for inputting and outputting the control signal, and

wherein the receiving apparatus exchanges the control signal with said storing apparatus, determines whether or not said storing apparatus is capable of inputting the audio data compressed in the predetermined compressing format, and causes said selecting means to select the audio data compressed in the predetermined compressing format or the PCM audio data corresponding to the determined result.

33. (original) The information storing system as set forth in claim 32, wherein when said storing apparatus is capable of inputting the audio data compressed in the predetermined compressing format, said selecting means selects the audio data compressed in the predetermined compressing format.

34. (original) An information storing system, comprising:

a receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed; and

a storing apparatus for storing the download audio data received by said receiving apparatus,

wherein the receiving apparatus comprises:

decoding means for decoding PCM audio data from the download audio data compressed in the predetermined compressing format;

selecting means for selectively outputting the audio data compressed in the predetermined compressing format and the PCM audio data; and

interface means for exchanging digital audio data received from said selecting means and a control signal,

wherein the storing apparatus comprises:

interface means for exchanging audio signal and a control signal, and

wherein the receiving apparatus exchanges the control signal with said storing apparatus, determines whether or not said storing apparatus is capable of inputting the audio data compressed in the predetermined compressing format, and causes said selecting means to select the audio data compressed in the predetermined compressing format or the PCM audio data corresponding to the determined result.

35. (original) The information storing system as set forth in claim 32, wherein when said storing apparatus is capable of inputting the audio data compressed in the predetermined compressing format, said selecting means selects the audio data compressed in the predetermined compressing format.

36. (original) A transmitting apparatus for multiplexing audio digital data of a plurality of audio broadcasts and digital data for an information screen corresponding to a transmitted audio broadcast and transmitting the multiplexed signal, comprising:

means for inserting an identification signal that represents a start position and an end position of a music title in audio digital data of an audio broadcast.

37. (original) A receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts and digital data for an information screen corresponding to a transmitted audio broadcast have been multiplexed, an identification signal that represents a start position and an end position of a music title being inserted in audio digital data of an audio broadcast, the receiving apparatus comprising:

means for decoding data of the information screen and displaying the information screen;

input means for inputting a desired music title to be stored on the information screen displayed;

identification signal detecting means for detecting the identification signal from the received audio broadcast; and

controlling means for generating a record start command corresponding to the identification signal that represents the start position of a music program and generating a record end command corresponding to the identification signal that represents the end position of the music program.

38. (original) An information storing system having a receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts and digital data for an information screen corresponding to a transmitted audio

broadcast have been multiplexed and a storing apparatus for storing an output signal of the receiving apparatus,

wherein the information storing system allows the listener to select a desired one from the plurality of audio broadcasts on the audio information screen and records a music title of the selected audio broadcast to the storing apparatus,

wherein an identification signal that represents a start position and an end position of a music title is inserted in the audio digital data of the audio broadcast,

wherein when an information storage command has been input to the receiving apparatus, it determines whether or not the identification signal that represents the start position of the music title has been detected, when the identification signal that represents the start position of the music title has been detected, the receiving apparatus sends a record start command to the storing apparatus, and when the identification signal that represents the end position of the music title has been detected, the recording apparatus sends a record end command to the storing apparatus, and wherein when the storing apparatus has received the record start command from the receiving apparatus, the storing apparatus starts recording a signal received from the receiving apparatus and when the storing apparatus has received the record end command from the receiving apparatus, the storing apparatus stops recording the signal received from the recording apparatus.

39. (original) A transmitting apparatus for multiplexing audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format, the transmitting apparatus comprising:

means for inserting identification data that represents a start position and an end position in the download audio data.

40. (original) A receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed, identification data that represents a start position and an end position of a music title being inserted in the download music data, the receiving apparatus comprising:

means for decoding data of the information screen and displaying the information screen;

input means for inputting a desired music title to be stored on the information screen displayed;

identification data detecting means for detecting the identification data from the received download audio data; and

controlling means for generating a record start command corresponding to the identification data that represents the start position of a music program and generating a record end command corresponding to the identification data that represents the end position of the music program.

41. (original) An information storing system having a receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed and a storing apparatus for storing an output signal of the receiving apparatus,

wherein the information storing system allows the listener to select a desired one from the download audio data on

the audio information screen and records the selected download audio data to the storing apparatus, wherein identification data that represents a start position and an end position of the download audio data is inserted in the download audio data,

wherein when an information storage command has been input to the receiving apparatus, it determines whether or not the identification data that represents the start position of the music title has been detected, when the identification data that represents the start position of the music title has been detected, the receiving apparatus sends a record start command to the storing apparatus, and when the identification data that represents the end position of the music title has been detected, the recording apparatus sends a record end command to the storing apparatus, and

wherein when the storing apparatus has received the record start command from the receiving apparatus, the storing apparatus starts recording a signal received from the receiving apparatus and when the storing apparatus has received the record end command from the receiving apparatus, the storing apparatus stops recording the signal received from the recording apparatus.

42. (original) A receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts and digital data for an information screen corresponding to a transmitted audio broadcast have been multiplexed, an identification signal that represents a start position and an end position of a music title being inserted in audio digital data of an audio broadcast, the receiving apparatus comprising:

means for decoding data of the information screen and displaying the information screen;

input means for inputting a plurality of music titles to be stored on the information screen displayed;

identification signal detecting means for detecting the identification signal from the received audio broadcast; and
controlling means for repeating a sequence of processes for selecting an audio broadcast corresponding to a first music title to be stored from the plurality of audio broadcasts, for generating a record start command when the identification signal that represents the start position of the music program has been detected, for generating a record end command and selecting an audio broadcast corresponding to a second music title to be stored from the plurality of audio broadcasts when the identification signal that represents the end position of the music title has been detected, and for generating a record end command when the identification signal that represents the end position of the music program has been detected.

43. (original) An information storing system having a receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed and a storing apparatus for storing an output signal of the receiving apparatus,

wherein the information storing system allows the listener to select a desired one from the plurality of audio broadcasts on the audio information screen and records the selected audio data to the storing apparatus,

wherein an identification signal that represents a start position and an end position of a music title is inserted in the audio digital data of the audio broadcast,

wherein the receiving apparatus repeats a sequence of processes for selecting an audio broadcast corresponding to a first music title to be stored from the plurality of audio

broadcasts, for generating a record start command when the identification signal that represents the start position of the music title has been detected, for generating a record end command and selecting a audio broadcast corresponding to a second music title to be stored from the plurality of audio broadcasts when the identification signal that represents the end position of the music title has been detected, and for generating a record end command when the identification signal that represents the end position of the music title has been detected, and

wherein when the storing apparatus has received the record start command from the receiving apparatus, the storing apparatus starts recording a signal received from the receiving apparatus and when the storing apparatus has received the record end command from the receiving apparatus, the storing apparatus stops recording the signal received from the recording apparatus.

44. (original) A receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed, identification data that represents a start position and an end position of a music title being inserted in download audio data, the receiving apparatus comprising:

means for decoding data of the information screen and displaying the information screen;

input means for inputting a plurality of music titles to be stored on the information screen displayed;

identification data detecting means for detecting the identification data from the received download audio data; and

controlling means for repeating a sequence of processes for selecting download audio data corresponding to a first music title to be stored from the download audio data, for generating a record start command when the identification data that represents the start position of the music program has been detected, for generating a record end command and selecting download audio data corresponding to a second music title to be stored from the download audio data when the identification data that represents the end position of the music title has been detected, and for generating a record end command when the identification data that represents the end position of the music program has been detected.

45. (original) An information storing system having a receiving apparatus for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed and a storing apparatus for storing an output signal of the receiving apparatus,

wherein the information storing system allows the listener to select download audio data corresponding to a plurality of music titles from the download audio data on the audio information screen and records the selected download audio data to the storing apparatus,

wherein identification data that represents a start position and an end position of a music title is inserted in the download audio data,

wherein the receiving apparatus repeats a sequence of processes for selecting download audio data corresponding to a first music title to be stored from the download audio data, for generating a record start command when the identification data that represents the start position of the music title has been

detected, for generating a record end command and selecting download audio data corresponding to a second music title to be stored from the download audio data when the identification data that represents the end position of the music title has been detected, and for generating a record end command when the identification data that represents the end position of the music title has been detected, and

wherein when the storing apparatus has received the record start command from the receiving apparatus, the storing apparatus starts recording a signal received from the receiving apparatus and when the storing apparatus has received the record end command from the receiving apparatus, the storing apparatus stops recording the signal received from the recording apparatus.

46. (previously presented) A receiving method comprising:

receiving a signal at a receiving apparatus of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed;

selectively outputting from the receiver at least one of the download audio data compressed in the predetermined compressing format and PCM audio data decoded from the downloaded audio data; and

determining whether or not a device connected to the receiving apparatus is capable of inputting the download audio data compressed in the predetermined compressing format corresponding a control signal that is input to the receiving apparatus.

47. (previously presented) The receiving method as set forth in claim 46, further comprising selecting the audio data

compressed in the predetermined compressing format when the connected device is capable of inputting the audio data compressed in the predetermined compressing format.

48. (previously presented) A receiving method comprising:

receiving a signal at a receiving apparatus of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed;

selectively outputting from the receiving apparatus at least one of the download audio data compressed in the predetermined compressing format and PCM audio data decoded from the downloaded audio data; and

determining whether or not a device connected to the receiving apparatus is capable of inputting the download audio data compressed in the predetermined compressing format corresponding to a control signal that is exchanged through an interface of the receiver that exchanges both audio data and the control signal, and

selecting the audio data compressed in the predetermined compressing format or the PCM audio data corresponding to the determined result.

49. (previously presented) The receiving method as set forth in claim 48, comprising selecting the audio data compressed in the predetermined compressing format when the connected device is capable of inputting the audio data compressed in the predetermined compressing format.

50. (canceled)

51. (previously presented) A receiving method for receiving a signal of which audio digital data of a plurality of audio broadcasts and digital data for an information screen corresponding to a transmitted audio broadcast have been multiplexed, an identification signal that represents a start position and an end position of a music title being inserted in audio digital data of an audio broadcast, comprising:

- decoding data of the information screen and displaying the information screen;

- selecting a desired music title to be stored on the information screen displayed;

- detecting the identification signal from the received audio broadcast; and

- generating a record start command corresponding to the identification signal that represents the start position of a music program and generating a record end command corresponding to the identification signal that represents the end position of the music program.

52. (previously presented) An information storing method comprising:

- receiving a signal at a receiving apparatus of which audio digital data of a plurality of audio broadcasts and digital data for an information screen corresponding to a transmitted audio broadcast have been multiplexed, an identification signal that represents a start position and an end position of a music title being inserted in the audio digital data of the audio broadcast;

- storing an output signal of the receiving apparatus in a storing apparatus,

- selecting a desired one from the plurality of audio broadcasts on the audio information screen;

recording a music title of the selected audio broadcast to the storing apparatus; and wherein when an information storage command has been input to the receiving apparatus, it determines whether or not the identification signal that represents the start position of the music title has been detected, when the identification signal that represents the start position of the music title has been detected, the receiving apparatus sends a record start command to the storing apparatus, and when the identification signal that represents the end position of the music title has been detected, the recording apparatus sends a record end command to the storing apparatus, and wherein when the storing apparatus has received the record start command from the receiving apparatus, the storing apparatus starts recording a signal received from the receiving apparatus and when the storing apparatus has received the record end command from the receiving apparatus, the storing apparatus stops recording the signal received from the recording apparatus.

53. (canceled)

54. (previously presented) A receiving method for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed, identification data that represents a start position and an end position of a music title being inserted in the download music data, comprising:

decoding data of the information screen and displaying the information screen;

selecting a desired music title to be stored on the information screen displayed;

detecting the identification data from the received download audio data; and

generating a record start command corresponding to the identification data that represents the start position of a music program and generating a record end command corresponding to the identification data that represents the end position of the music program.

55. (previously presented) A receiving method for receiving a signal of which audio digital data of a plurality of audio broadcasts and digital data for an information screen corresponding to a transmitted audio broadcast have been multiplexed, an identification signal that represents a start position and an end position of a music title being inserted in audio digital data of an audio broadcast, comprising:

decoding data of the information screen and displaying the information screen;

selecting a plurality of music titles to be stored on the information screen displayed;

detecting the identification signal from the received audio broadcast; and

repeating a sequence of processes for selecting an audio broadcast corresponding to a first music title to be stored from the plurality of audio broadcasts, for generating a record start command when the identification signal that represents the start position of the music program has been detected, for generating a record end command and selecting an audio broadcast corresponding to a second music title to be stored from the plurality of audio broadcasts when the identification signal that represents the end position of the music title has been detected, and for generating a record end command when the identification signal that represents the end position of the music program has been detected.

56. (previously presented) A receiving method for receiving a signal of which audio digital data of a plurality of audio broadcasts, digital data for an information screen corresponding to a transmitted audio broadcast, and download audio data compressed in a predetermined compressing format have been multiplexed, identification data that represents a start position and an end position of a music title being inserted in download audio data, comprising:

- decoding data of the information screen and displaying the information screen;

- inputting a plurality of music titles to be stored on the information screen displayed;

- detecting the identification data from the received download audio data; and

- repeating a sequence of processes for selecting download audio data corresponding to a first music title to be stored from the download audio data, for generating a record start command when the identification data that represents the start position of the music program has been detected, for generating a record end command and selecting download audio data corresponding to a second music title to be stored from the download audio data when the identification data that represents the end position of the music title has been detected, and for generating a record end command when the identification data that represents the end position of the music program has been detected.